

Email from Chan-Abraham_11-06-2019 FW PERMIT FOR PFAS DISCHARGES TO PUBLIC WATERS CHALLENGED.txt

From: Pongkhamsing, Chan
Sent: Wednesday, November 06, 2019 10:00 AM
To: Vakoc, Misha
Cc: Levo, Brian
Subject: FW: PERMIT FOR PFAS DISCHARGES TO PUBLIC WATERS CHALLENGED
Attachments: 10_31_19 Letter to EPA.pdf; Untitled attachment 00018.html; RA FACTWNAS PFAS 10-31-19 .pdf; Untitled attachment 00021.html; SAMPLE RESULTS.xlsx.pdf; Untitled attachment 00024.html

FYI

Thank You and Respectfully,

Chan Pongkhamsing
Remedial Project Manager
Site Cleanup Section 4
Superfund & Emergency Management Division
U.S. EPA, Region 10
1200 Sixth Avenue, Suite 155 (M/S: 12-D12-1)
Seattle, Washington 98101-3140
(206) 553-1806

From: Richard Abraham <(b) (6)>
Sent: Friday, November 01, 2019 4:33 PM
Subject: PERMIT FOR PFAS DISCHARGES TO PUBLIC WATERS CHALLENGED

The EPA has proposed a Stormwater Discharge Permit for Navy discharges to Clover Valley Creek and Dugualia Bay.
(<https://www.epa.gov/npdes-permits/npdes-permit-whidbey-island-navalair-station>). The public comment period ends November 14, much of it having passed without the public knowing about the 6 PFAS chemicals in the water.

The EPA acknowledges that the proposed Permit was prepared without knowledge of the 6 PFASs contaminated discharges.

Ironically, the proposed Permit calls on the Navy to educate the public about "Resident Killer Whales"—but it doesn't require monitoring for the PFASs that are known to accumulate in marine mammals and fish.

Email from Chan-Abraham_11-06-2019 FW PERMIT FOR PFAS DISCHARGES TO PUBLIC WATERS CHALLENGED.txt
Contact Misha Vakoc (vakoc.misha@epa.gov) if you want a public hearing, want to make
comments, or have the comment period extended.

Use and share my letter to EPA.

Rick Abraham

Richard Abraham

(b) (6)

richardabrahamconsulting.com

(b) (6)

October 30, 2019

U.S. EPA Region 10
Director, Water Division
1200 Sixth Avenue, Suite 155 (WD-19-C04)
Seattle, Washington, 98101

ATTEN: Misha Vakoc, EPA Region 10 Municipal Stormwater Coordinator

**RE: Illicit Discharges, Proposed NPDES Permit WAS026611 for Naval Air Station
Whidbey Island Municipal Separate Storm Sewer System**

Ms. Vakoc,

This letter conveys two requests and follows our phone conversation yesterday concerning WNAS proposed Permit WAS02661 and illicit discharges of PFAS (chemicals to Clover Valley Creek, Clover Valley Lagoon and Dugall Bay).

As reflected in the information provided with this letter, significant concentrations of six PFAS chemicals were discharged to Clover Valley Creek, Clover Valley Lagoon and Dugall Bay in monthly samples from September 2018 thru September 2019. These on-going discharges have occurred without the EPA's or the public's knowledge and contain six PFAS chemicals associated with Aqueous Film Forming Foam (AFFF) that the proposed permit specifically prohibits in routine non-emergency discharges. At least three water wells near Clover Valley Creek evidence PFAS contamination.

You indicated that you, and other appropriate EPA staff persons, had not been made aware of these discharges—and the provisions of the permit were not drafted with the knowledge that these PFAS contaminated discharges were occurring.

The PFAS containing discharges were also occurring, apparently unknown to the Washington Department of Ecology, on and before June 20, 2019 when it granted Clean Water Act 401 Final Certification for Permit WAS026611. That certification was based, in part, on conformance with the “prohibition on discharges that cause or tend to cause pollution of waters of the state of Washington.”

According to EPA's Fact Sheet, Clover Valley Creek and Lagoon are, “protected for core summer salmonid habitat; extraordinary primary contact recreation; water supply uses (domestic, industrial, agricultural, stock); and miscellaneous uses (wildlife habitat, harvesting, commerce/navigation, boating, and aesthetics).” PFAS (polyfluoroalkyl or perfluoroalkyl) chemicals are harmful to humans, persistent in the environment, and accumulate in fish, and marine mammals.

Ironically, the proposed permit requires the Navy to establish an on-going educational program on “stormwater threats to Southern Resident Killer Whales”, at the same time the Navy discharges chemicals that threaten them.

I request a new public comment period or an extension of the existing public comment period that began on September 30, 2019 and is scheduled to expire November 14, 2019.

Information about on-going discharges that are relevant to provisions of the permit had not been made available to the public at the time the public comment period began. The general public has yet to be adequately informed about the Navy's stormwater discharges. People need accurate information and sufficient time to prepare and present meaningful comments. They have neither.

The Permit Fact Sheet, which accompanied EPA's notice of the public's opportunity to request a hearing and comment, was not prepared with the knowledge that these discharges were occurring and likely to continue; neither did the Fact Sheet reflect that the discharges were occurring, or likely to continue occur.

The proposed permit sets forth "conditions, prohibitions, and management practices for discharges of stormwater" that were not prepared with the EPA's knowledge of the PFAS contaminated discharges that were occurring and likely to continue. This information was essential to the drafting of an adequately protective permit.

\

At the time the U.S. Fish and Wildlife Service and National Marine Fisheries provided input on the Permit, they most likely had not been made aware of these continuing illicit discharges, and could still be unaware of their occurrence.

I request that EPA investigate the source and nature of contaminants entering and discharging from the Navy's storm water collection and discharge system.

The Navy's reluctance to be forthcoming with information about PFASs found in its stormwater points to the need for this investigation. According to WNAS statements in a news article, the discovery of unexpected odors in a storm drain resulted in it being "resampled" in August of 2018. PFAS were not likely to be the cause of odors and PFASs weren't expected to be found. It is possible, if not likely, that other contaminants were tested for during this sampling. The results should be made available to the public and EPA. Contaminants that might have been found could be in the discharges governed by the permit.

According to WNAS, the PFASs found in Clover Creek Water may come from contaminated groundwater entering the stormwater system. In addition to PFASs, 1,4-dioxane, trichloroethene and vinyl chloride are known to be in groundwater beneath portions of WNAS.

Please consider this an open letter and feel free to contact me if you have questions.

Sincerely,

Richard Abraham

cc: State of Washington, Department of Ecology, Water Quality Program
Attachments: Fact Sheet; Summary of WNAS Sample Reports, Depiction of Area

ⁱ 40 CFR 122.26(b)(2) defines an illicit discharge as any discharge to an MS4 that is not composed entirely of storm water, except allowable discharges pursuant to an NPDES permit, including those resulting from fire fighting activities.

More PFASs Found: Clover Valley Creek, Dugual Bay, and Aquifer

Navy Seeks Permit

10-30-2019 R. Abraham richardabrahamconsulting.com

The Navy found PFAS chemicals in surface water coming from its base in Oak Harbor more than a year ago – but didn’t reveal all that were found. Neither did it disclose that it knew, nine months ago, PFASs had seeped to portions of the aquifer.

In October of last year the Navy revealed that *two* PFASs had been found in Clover Valley Creek and Lake.¹ However, it was not until mid-October 2019, a year later, that reports were posted on a Navy website showing that *six* PFASs had actually been found—in every monthly sample from September 2018 to September 2019.²

PFAS chemicals don’t breakdown, accumulate in the body, and are linked health a host of health problems including cancer. There are 114 properties in the area where water is still used for irrigating. Cattle graze on grass flooded by PFAS containing water. The Creek and Lake empties to Dugual Bay and a Salmon Restoration Area.³

The two PFASs the Navy first admitted to finding in the surface water were, PFOA and PFOS. But, also found, in every sample taken from September 2018 through September 2019 were PFHXS, PFHXA, PFHPA, and PFBS—the same ‘forever’ chemicals” found in Coupeville’s drinking water now being filtered at the Navy’s expense.

Citizens wanting to know all the chemicals found in the Creek were told at the Navy’s April 2019 Restoration Advisory Board meeting that the analysis reports were completed, but not available at the meeting. Base Commander, Captain Army, stated that providing the complete analysis reports was an “action item.”⁴ It was an action not taken for six more months.

When results of Clover Valley Creek testing were finally posted on a Navy website, PFHXS was found at the highest levels—up to 90.8 parts per trillion (ppt). PFHXS is linked to child development and other health problems and takes about 8 years for the body to rid itself of just half of what it accumulated. PFOA is found up to 39.3 and PFOS up to 143 ppt. The total of all PFASs in a monthly sample has been as high as 266.7 ppt.⁵

The Navy has been quick to say that contaminated surface water doesn’t mean groundwater is contaminated. But, buried within the Navy’s websites are summaries of test results from January 2019 showing the contamination of three Clover Creek area wells with PFOA, PFHXS and/or PFBS.⁶ The family with the most contaminated well didn’t receive results until October 21, 2019. The well contained PFOA at 19.2 ppt and PFHXS at 33.6 ppt.

The Navy says it is “committed to open and transparent communication regarding this [PFAS] issue.” Its conduct says otherwise. The Navy’s public website only counts the wells that had PFOA and PFOS above EPA’s Advisory. There is no counting of findings below that level—or the finding of other PFASs. The Navy’s practice has been to phone well owners if their test results exceed EPA’s Health Advisory Level for PFOA and PFOS—but not tell them if lesser amounts or other PFASs were found.⁷

Not giving people complete and timely information about PFAS contamination has been standard Navy practice⁸—and a bad example followed by Coupeville. The Town withheld, for almost a year, information about all the PFASs in its water.⁹ Both used the same excuse. They didn’t tell people because they weren’t required to.¹⁰

In fact, there is no law or regulation that prevents the Navy from telling people about all the chemicals in their water. Withholding such information denies people of opportunities to protect themselves; by avoiding exposures, asking for cleanup, and insisting that the Navy replace PFAS containing firefighting foams that caused the contamination.

Most Clover Creek area wells sampled haven’t shown detections, but all wells haven’t been sampled. PFASs are still seeping to the aquifer and still discharging to Dugual Bay—public waters classified by the State as “extraordinary” for aquatic life uses, protected shellfish harvesting, and threatened and endangered species.

The EPA has proposed a Stormwater Discharge Permit for Navy discharges to Clover Valley Creek and Dugualla Bay. (<https://www.epa.gov/npdes-permits/npdes-permit-whidbey-island-naval-air-station>). The public comment period ends November 14, much of it having passed without the public knowing about the PFASs. In fact, the EPA acknowledges that the proposed Permit was prepared without knowledge of the PFAS contaminated discharges. PFAS monitoring of discharges is not required. Ironically, the proposed Permit calls on the Navy to educate the public about “Resident Killer Whales”—but it doesn’t require monitoring for the PFASs that are known to accumulate in marine mammals and fish.

Contact Misha Vakoc (vakoc.misha@epa.gov) if you want a public hearing, want to make comments, or have the comment period extended.

¹ ‘Routine maintenance Reveals Firefighting Foam in base stormwater,’ 10-23-2018 Whidbey News Times. Excerpt, “In early October, results came back that showed the contaminants were leaving the base via the creek. Results found 172 parts per trillion at the installation’s eastern boundary and 149 parts per trillion near the inlet to Dugualla Bay.

² Sample results were posted on Navy Restoration Advisory Board (RAB) Website following the filing of a Freedom of Information Act request. The results were then posted at https://www.navfac.navy.mil/navfac_worldwide/pacific/fecs/northwest/about_us/northwest_documents/environmental-restoration/naval-air-station-whidbey-island-restoration-advisory-board.html

³ According to EPA Fact Sheet for NPDES Permit # WAS026611, Clover Valley Creek is, “protected for core summer salmonid habitat; extraordinary primary contact recreation; water supply uses (domestic, industrial, agricultural, stock); and miscellaneous uses (wildlife habitat, harvesting, commerce/navigation, boating, and aesthetics).”

⁴ Excerpt from RAB meeting minutes of April 4, 2019 reflect citizens questions and navy response: “What else was found in Clover Creek and the drainage ditch leading to Clover Creek besides PFOA and PFOS? I understand 14 compounds were tested. Ms. Leibman and Ms. Bengston did not have the results with them at the meeting...Captain Army added an action item to provide the results to Mr. Abraham.”

⁵ Results of Clover Valley Creek Surface Water Sampling posted on: https://www.navfac.navy.mil/navfac_worldwide/pacific/fecs/northwest/about_us/northwest_documents/environmental-restoration/naval-air-station-whidbey-island-restoration-advisory-board.html

⁶ Sampling results posted on, NASWI_DW Ault Field Phase 4 Data Summary

⁷ Rick Abraham discussion with Kendra Leibman, Navy RAB co-chair, following Navy Restoration Advisory Board meeting of 10-24-2019.

⁸ The Navy only sampled for *some* PFASs in the community—not for all the PFASs it knew to be in the aquifer. The Navy only sampled for three PFASs even though six were sampled for on its own property; The Navy did not look for PFHpA and PFHxS in the community’s water, even though both were found in its own water; The Navy used higher detection limits when sampling the community’s water than were used on its own property. This allowed for some PFASs found in the Navy’s water to go undetected and unreported in the community’s water; At the Navy’s request, the Island County Health Department kept the plan for testing the community’s water from the public until *after* testing was underway.

⁹ In January of 2017, the Town of Coupeville announced it had independently tested its water for three PFASs. For over a year, it had been testing for six PFAS and not posting complete reports.

CLOVER VALLEY CREEK AND LAKE AREA SURFACE WATER SAMPLES

Analysis Reports can be found at: https://www.navfac.navy.mil/navfac_worldwide/pacific/fecs/northwest/abc

Analyte - CAS Number - Conc. (ng/L) - DL - LOD - LOQ - Qualifiers - Batch - Extracted - Samp Size - Analyzed Dilution

	PFAS	AMNT
PFBS 375-73-5 8.93 3.01 4.39 8.78 B8J0009 02-Oct-18 0.114 L 04-O	PFBS	8.93
PFHxA 307-24-4 23.5 3.01 4.39 8.78 B8J0009 02-Oct-18 0.114 L 04-C	PFHxA	23.5
PFHpA 375-85-9 7.45 3.01 4.39 8.78 J B8J0009 02-Oct-18 0.114 L 04	PFHpA	7.45
PFHxS 355-46-4 46.7 3.01 4.39 8.78 B8J0009 02-Oct-18 0.114 L 04-C	PFHxS	46.7
PFOA 335-67-1 28.7 3.01 4.39 8.78 B8J0009 02-Oct-18 0.114 L 04-O	PFOA	28.7
PFNA 375-95-1 ND 3.01 4.39 8.78 B8J0009 02-Oct-18 0.114 L 04-O	PFNA	ND
PFOS 1763-23-1 143 3.01 4.39 8.78 B8J0009 02-Oct-18 0.114 L 04-O	PFOS	143
	TOTAL	258.28

PFBS 375-73-5 10.5 2.92 4.27 8.52 B8K0215 02-Dec-18 0.117 L 04-D	PFBS	10.5	Sample ID: PFC-AF-01-03-112918
PFHxA 307-24-4 27.9 2.92 4.27 8.52 B8K0215 02-Dec-18 0.117 L 04-	PFHxA	27.9	Matrix:
PFHpA 375-85-9 11.2 2.92 4.27 8.52 B8K0215 02-Dec-18 0.117 L 04-	PFHpA	11.2	Laboratory Data
PFHxS 355-46-4 56.5 2.92 4.27 8.52 B8K0215 02-Dec-18 0.117 L 04-L	PFHxS	56.5	Lab Sample: 1803788-03
PFOA 335-67-1 31.6 2.92 4.27 8.52 B8K0215 02-Dec-18 0.117 L 04-D	PFOA	31.6	PFAS Isotope Dilution Method
PFNA 375-95-1 ND 2.92 4.27 8.52 B8K0215 02-Dec-18 0.117 L 04-De	PFNA		SKOOKUM Contract Services Aqueous Column: BEH C18
PFOS 1763-23-1 124 2.92 4.27 8.52 B8K0215 02-Dec-18 0.117 L 04-C	PFOS	124	29-Nov-18 12:20 Date Received: 30-Nov-18 10:50
	TOTAL	261.7	Location: (b) (6)

PFBS 375-73-5 10.5 2.92 4.27 8.52 B8K0215 02-Dec-18 0.117 L 04-D	PFBS	10.5	Sample ID: PFC-AF-01-03-121918
PFHxA 307-24-4 19.0 3.09 4.50 9.03 B8L0181 27-Dec-18 0.111 L 30-L	PFHxA	19	Matrix:
PFHpA 375-85-9 8.28 3.09 4.50 9.03 J B8L0181 27-Dec-18 0.111 L 30	PFHpA	8.28	Laboratory Data
PFHxS 355-46-4 57.0 3.09 4.50 9.03 B8L0181 27-Dec-18 0.111 L 30-C	PFHxS	57	Lab Sample: 1804146-03
PFOA 335-67-1 22.4 3.09 4.50 9.03 B8L0181 27-Dec-18 0.111 L 30-D	PFOA	22.4	PFAS Isotope Dilution Method
PFNA 375-95-1 ND 3.09 4.50 9.03 B8L0181 27-Dec-18 0.111 L 30-De	PFNA		SKOOKUM Contract Services Aqueous Column: BEH C18
PFOS 1763-23-1 68.1 3.09 4.50 9.03 B8L0181 27-Dec-18 0.111 L 30-L	PFOS	68.1	19-Dec-18 12:30 Date Received: 20-Dec-18 10:12
	TOTAL	185	Location: (b) (6)

PFBS 375-73-5 13.8 3.02 4.42 8.82 B9A0086 11-Jan-19 0.113 L 14-Ja	PFBS	13.8	PFC Monthly Sites, FY19 Dec
PFHxA 307-24-4 25.1 3.02 4.42 8.82 B9A0086 11-Jan-19 0.113 L 14-J	PFHxA	25.1	Sample ID: PFC-AF-01-03-010819
PFHpA 375-85-9 9.78 3.02 4.42 8.82 B9A0086 11-Jan-19 0.113 L 14-J	PFHpA	9.78	Matrix:
PFHxS 355-46-4 79.4 3.02 4.42 8.82 B9A0086 11-Jan-19 0.113 L 14-J	PFHxS	79.4	Laboratory Data
PFOA 335-67-1 31.2 3.02 4.42 8.82 B9A0086 11-Jan-19 0.113 L 14-Ja	PFOA	31.2	Lab Sample: 1900091-03
PFNA 375-95-1 ND 3.02 4.42 8.82 B9A0086 11-Jan-19 0.113 L 14-Jan	PFNA		PFAS Isotope Dilution Method
PFOS 1763-23-1 81.9 3.02 4.42 8.82 B9A0086 11-Jan-19 0.113 L 14-J	PFOS	81.9	SKOOKUM Contract Services Aqueous Column: BEH C18
TOTAL	241.18	08-Jan-19 09:00	Date Received: 10-Jan-19 10:47
		Location:	(b) (6)
PFBS 375-73-5 14.5 3.06 4.46 8.93 B9C0010 04-Mar-19 0.112 L 05-M	PFBS	14.5	Client Data
PFHxA 307-24-4 23.6 3.06 4.46 8.93 B9C0010 04-Mar-19 0.112 L 05-	PFHxA	23.6	PFC Monthly Sites, Part A, FY19 Feb
PFHpA 375-85-9 11.4 3.06 4.46 8.93 B9C0010 04-Mar-19 0.112 L 05-	PFHpA	11.4	Sample ID: PFC-AF-M-03-022619
PFHxS 355-46-4 90.8 3.06 4.46 8.93 B9C0010 04-Mar-19 0.112 L 05-	PFHxS	90.8	Matrix:
PFOA 335-67-1 30.9 3.06 4.46 8.93 B9C0010 04-Mar-19 0.112 L 05-M	PFOA	30.9	Laboratory Data
PFNA 375-95-1 ND 3.06 4.46 8.93 B9C0010 04-Mar-19 0.112 L 05-M	PFNA		Lab Sample: 1900381-03
PFOS 1763-23-1 95.5 3.06 4.46 8.93 B9C0010 04-Mar-19 0.112 L 05-	PFOS	95.5	PFAS Isotope Dilution Method
TOTAL	266.7	26-Feb-19 12:50	Date Received: 01-Mar-19 11:19
		Location:	(b) (6)
PFBS 375-73-5 11.6 3.00 4.39 8.77 B9C0141 21-Mar-19 0.114 L 22-M	PFBS	11.6	Client Data
PFHxA 307-24-4 26.0 3.00 4.39 8.77 B9C0141 21-Mar-19 0.114 L 22-	PFHxA	26	PFC Monthly Sampling, FY19 Mar
PFHpA 375-85-9 10.5 3.00 4.39 8.77 B9C0141 21-Mar-19 0.114 L 22-	PFHpA	10.5	Sample ID: PFC-AF-01-03-031819
PFHxS 355-46-4 76.2 3.00 4.39 8.77 B9C0141 21-Mar-19 0.114 L 22-	PFHxS	76.2	Matrix: Location: E Property, Map Grid E13
PFOA 335-67-1 36.5 3.00 4.39 8.77 B9C0141 21-Mar-19 0.114 L 22-M	PFOA	36.5	Laboratory Data
PFNA 375-95-1 ND 3.00 4.39 8.77 B9C0141 21-Mar-19 0.114 L 22-M	PFNA		Lab Sample: 1900494-03
PFOS 1763-23-1 89.5 3.00 4.39 8.77 B9C0141 21-Mar-19 0.114 L 22-	PFOS	89.5	PFAS Isotope Dilution Method
TOTAL	250.3	18-Mar-19 10:10	Date Received: 20-Mar-19 11:18

PFBS 375-73-5 7.72 3.03 4.42 8.86 J B9D0164 19-Apr-19 0.113 L 22-1	PFBS	7.72	Client Data	Location: (b) (6)
PFHxA 307-24-4 21.1 3.03 4.42 8.86 B9D0164 19-Apr-19 0.113 L 22-1	PFHxA	21.1	PFC Monthly Sampling Part A, FY19 Apr	
PFHpA 375-85-9 7.81 3.03 4.42 8.86 J, Q B9D0164 19-Apr-19 0.113 L	PFHpA	7.81	Sample ID: PFC-AF-01-03-041219	
PFHxS 355-46-4 52.3 3.03 4.42 8.86 B9D0164 19-Apr-19 0.113 L 22-1	PFHxS	52.3	Matrix: PFC Monthly Sampling Part A, FY19 May	
PFOA 335-67-1 25.1 3.03 4.42 8.86 B9D0164 19-Apr-19 0.113 L 22-A	PFOA	25.1	Laboratory Data	
PFNA 375-95-1 ND 3.03 4.42 8.86 B9D0164 19-Apr-19 0.113 L 22-Apr	PFNA		Lab Sample: 1900780-03	
PFOS 1763-23-1 60.9 3.03 4.42 8.86 B9D0164 19-Apr-19 0.113 L 22-	PFOS	60.9	PFAS Isotope Dilution Method	
	TOTAL	174.93	SKOOKUM Contract Services Aqueous Column: BEH C18	
			12-Apr-19 10:55 Date Received: 18-Apr-19 09:41	

PFBS 375-73-5 9.79 2.95 4.31 8.60 B9E0080 10-May-19 0.116 L 13-M	PFBS	9.79	Sample ID: PFC-AF-01-03-050719	
PFHxA 307-24-4 26.9 2.95 4.31 8.60 B9E0080 10-May-19 0.116 L 13-M	PFHxA	26.9	Matrix:	
PFHpA 375-85-9 8.44 2.95 4.31 8.60 J B9E0080 10-May-19 0.116 L 1	PFHpA	8.44	Laboratory Data	
PFHxS 355-46-4 66.8 2.95 4.31 8.60 B9E0080 10-May-19 0.116 L 13-M	PFHxS	66.8	Lab Sample: 1901042-03	
PFOA 335-67-1 38.8 2.95 4.31 8.60 B9E0080 10-May-19 0.116 L 13-M	PFOA	38.8	PFAS Isotope Dilution Method	
PFNA 375-95-1 ND 2.95 4.31 8.60 B9E0080 10-May-19 0.116 L 13-M	PFNA		SKOOKUM Contract Services Aqueous Column: BEH C18	
PFOS 1763-23-1 79.7 2.95 4.31 8.60 B9E0080 10-May-19 0.116 L 13-	PFOS	79.7	07-May-19 10:15 Date Received: 09-May-19 09:44	
	TOTAL	230.43	Location: (b) (6)	

PFBS 375-73-5 7.81 2.99 4.39 8.74 J B9F0133 17-Jun-19 0.114 L 18-J	PFBS	7.81	Sample ID: PFC-AF-01-03-061119	
PFHxA 307-24-4 18.0 2.99 4.39 8.74 B9F0133 17-Jun-19 0.114 L 18-J	PFHxA	18	Matrix: PFC Monthly Sampling - FY19 June	
PFHpA 375-85-9 6.17 2.99 4.39 8.74 J B9F0133 17-Jun-19 0.114 L 18	PFHpA	6.17	Laboratory Data	
PFHxS 355-46-4 46.4 2.99 4.39 8.74 B9F0133 17-Jun-19 0.114 L 18-J	PFHxS	46.4	Lab Sample: 1901559-03	
PFOA 335-67-1 23.1 2.99 4.39 8.74 B9F0133 17-Jun-19 0.114 L 18-Ju	PFOA	23.1	PFAS Isotope Dilution Method	
PFNA 375-95-1 ND 2.99 4.39 8.74 B9F0133 17-Jun-19 0.114 L 18-Jun	PFNA	ND	SKOOKUM Contract Services Aqueous Column: BEH C18	
PFOS 1763-23-1 57.8 2.99 4.39 8.74 B9F0133 17-Jun-19 0.114 L 18-J	PFOS	57.8	11-Jun-19 14:20 Date Received: 13-Jun-19 09:59	
	TOTAL	159.28	Location: (b) (6)	

PFBS 375-73-5 7.95 2.97 4.35 8.66 J B9G0126 13-Jul-19 0.115 L 17-Jul-19	PFBS	7.95	Sample ID: PFC-AF-01-03-071019
PFHxA 307-24-4 21.4 2.97 4.35 8.66 B9G0126 13-Jul-19 0.115 L 17-Jul-19	PFHxA	21.4	Matrix: PFC Monthly Sampling Part A, FY19 Jul
PFHpA 375-85-9 5.74 2.97 4.35 8.66 J B9G0126 13-Jul-19 0.115 L 17-Jul-19	PFHpA	5.74	Laboratory Data
PFHxS 355-46-4 47.2 2.97 4.35 8.66 B9G0126 13-Jul-19 0.115 L 17-Jul-19	PFHxS	47.2	Lab Sample: 1902057-03
PFOA 335-67-1 23.0 2.97 4.35 8.66 B9G0126 13-Jul-19 0.115 L 17-Jul-19	PFOA	23	PFAS Isotope Dilution Method
PFNA 375-95-1 ND 2.97 4.35 8.66 B9G0126 13-Jul-19 0.115 L 17-Jul-19	PFNA		SKOOKUM Contract Services Aqueous Column: BEH C18
PFOS 1763-23-1 58.3 2.97 4.35 8.66 B9G0126 13-Jul-19 0.115 L 17-Jul-19	PFOS	58.3	10-Jul-19 08:40 Date Received: 11-Jul-19 11:16
	TOTAL	163.59	Location: (b) (6)

	PFBS	8.24	Sample ID: PFC-AF-01-03-082719
PFHxA 307-24-4 19.9 3.14 4.59 9.17 B9H0347 30-Aug-19 0.109 L 04-Sep-19	PFHxA	19.9	Matrix:
PFHpA 375-85-9 5.43 3.14 4.59 9.17 J B9H0347 30-Aug-19 0.109 L 04-Sep-19	PFHpA	5.43	Laboratory Data
PFHxS 355-46-4 44.3 3.14 4.59 9.17 B9H0347 30-Aug-19 0.109 L 04-Sep-19	PFHxS	44.3	Lab Sample: 1902866-03
PFOA 335-67-1 39.3 3.14 4.59 9.17 B9H0347 30-Aug-19 0.109 L 04-Sep-19	PFOA	39.3	PFAS Isotope Dilution Method
PFNA 375-95-1 ND 3.14 4.59 9.17 B9H0347 30-Aug-19 0.109 L 04-Sep-19	PFNA		SKOOKUM Contract Services Aqueous Column: BEH C18
PFOS 1763-23-1 76.5 3.14 4.59 9.17 B9H0347 30-Aug-19 0.109 L 04-Sep-19	PFOS	76.5	27-Aug-19 14:05 Date Received: 29-Aug-19 10:09
	TOTAL	193.67	Location: (b) (6)

PFBS 375-73-5 3.39 3.05 4.46 8.90 J B9I0195 23-Sep-19 0.112 L 24-Sep-19	PFBS	3.39	Sample ID: PFC-AF-01-03-091719
PFHxA 307-24-4 14.1 3.05 4.46 8.90 B9I0195 23-Sep-19 0.112 L 24-Sep-19	PFHxA	14.1	Matrix: PFC Monthly Sampling - FY19 Sep
PFHpA 375-85-9 5.46 3.05 4.46 8.90 J B9I0195 23-Sep-19 0.112 L 24-Sep-19	PFHpA	5.46	Laboratory Data
PFHxS 355-46-4 36.7 3.05 4.46 8.90 B9I0195 23-Sep-19 0.112 L 24-Sep-19	PFHxS	36.7	Lab Sample: 1903180-03
PFOA 335-67-1 20.3 3.05 4.46 8.90 B9I0195 23-Sep-19 0.112 L 24-Sep-19	PFOA	20.3	PFAS Isotope Dilution Method
PFNA 375-95-1 ND 3.05 4.46 8.90 B9I0195 23-Sep-19 0.112 L 24-Sep-19	PFNA		SKOOKUM Contract Services Aqueous Column: BEH C18
PFOS 1763-23-1 50.4 3.05 4.46 8.90 B9I0195 23-Sep-19 0.112 L 24-Sep-19	PFOS	50.4	17-Sep-19 14:45 Date Received: 19-Sep-19 10:28
	TOTAL	130.35	Location: (b) (6)